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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,231	05/07/2001	Peter Krulevitch	IL-10581	3998

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EXAMINER

SIMONE, CATHERINE A

ART UNIT PAPER NUMBER

1772

DATE MAILED: 06/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/851,231

Applicant(s)

KRULEVITCH ET AL.

Examiner

Catherine Simone

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Withdrawn Rejections

1. The 35 U.S.C. 102 rejection of claims 11-16 as being anticipated by Chow of record in the Office Action mailed 1/14/04, Pages 2-3, Paragraph #4 has been withdrawn due to the Applicant's amendment filed 3/25/04.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 11-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 recites the limitation "said annealed substrate" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 11 and 13-15** are rejected under 35 U.S.C. 102(e) as being anticipated by Krulevitch et al. (6,437,551).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Krulevitch et al. discloses an apparatus having a sealed microchannel therein, produced by the method comprising providing an etched substrate, providing an etched microchannel in the etched substrate, positioning an annealed substrate on the etched substrate so that the annealed substrate covers the etched microchannel in the etched substrate, annealing the etched substrate and the annealed substrate to form an annealed microchannel in the annealed substrate over the etched microchannel in the etched substrate, and bonding the etched substrate to the annealed substrate forming a bond connecting the etched substrate and the annealed substrate, wherein the etched microchannel and the annealed microchannel comprise the sealed microchannel (see col. 6, lines 37-42). Regarding **claim 13**, note the etched microchannel in the etched substrate and the annealed microchannel in the annealed substrate form a circular sealed microchannel (see col. 6, lines 41-42). Regarding **claim 14**, note the etched substrate and the annealed substrate are glass (see col. 6, lines 39-41 and col. 16, lines 9-11). Regarding **claim 15**, note the bond comprises fusion or anodic bonding (see col. 9, lines 51-59).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 12 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Krulevitch et al. (6,437,551).

Krulevitch et al. discloses an apparatus having a sealed microchannel therein, produced by the method comprising providing an etched substrate, providing an etched microchannel in the etched substrate, positioning an annealed substrate on the etched substrate so that the annealed substrate covers the etched microchannel in the etched substrate, annealing the etched substrate and the annealed substrate to form an annealed microchannel in the annealed substrate over the etched microchannel in the etched substrate, and bonding the etched substrate to the annealed substrate forming a bond connecting the etched substrate and the annealed substrate, wherein the etched microchannel and the annealed microchannel comprise the sealed microchannel (see col. 6, lines 37-42). However, Krulevitch et al. fails to disclose an annealing temperature in the 600° to 800°C range and a depth of about 10 µm and a width of about 20 µm for the annealed microchannel. Krulevitch et al. does, however, teach an annealing temperature of 550°C (see col. 9, line 54) and a microchannel having a depth of 20 µm (see col. 12, lines 65-66) and a width of 10 µm (see col. 13, lines 1-2). Therefore, the optimum ranges for the annealing temperature and the width and depth of the microchannel would be readily determined

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through routine experimentation by one having ordinary skill in the art depending on the desired end results. Thus, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have modified the annealing temperature in Krulevitch et al. to be in the 600° to 800°C range and have modified the depth and width of the microchannel in Krulevitch et al. to be of about 10 µm in depth and of about 20 µm in width, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art in absence of showing unexpected results. *MPEP 2144.05 (II)*.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 11-16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2 and 21 of U.S. Patent No. 6,437,551.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims and the specification of U.S. Patent 6,437,551 are broad enough to encompass or include that which is recited in the present patent application.

Response to Arguments

10. Applicant's arguments with respect to claims 11-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Catherine Simone whose telephone number is (571)272-1501. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CAS
Catherine Simone
Examiner
Art Unit 1772
June 16, 2004

Harold Pyon
HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

6/16/04